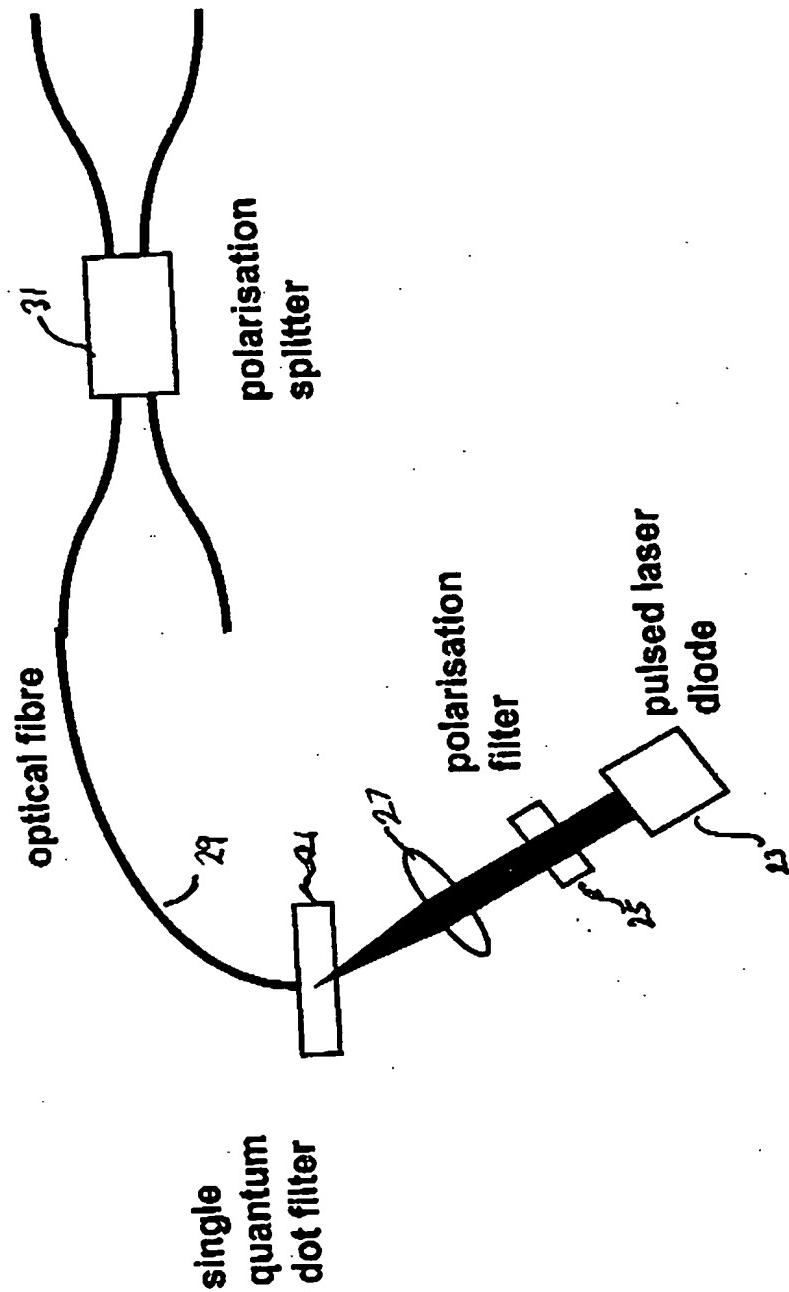


FIGURE 1.



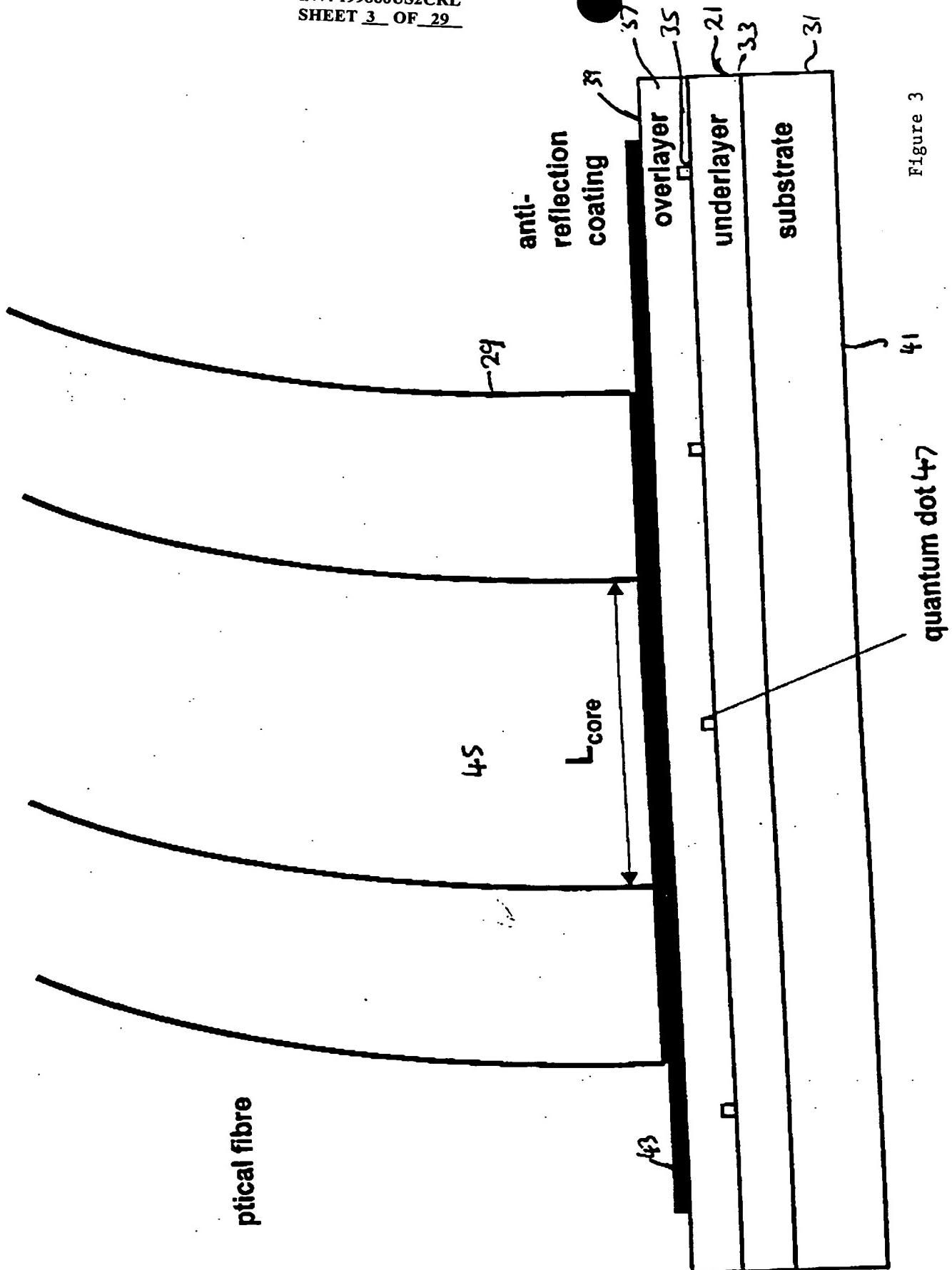


Figure 3

41

quantum dot 47

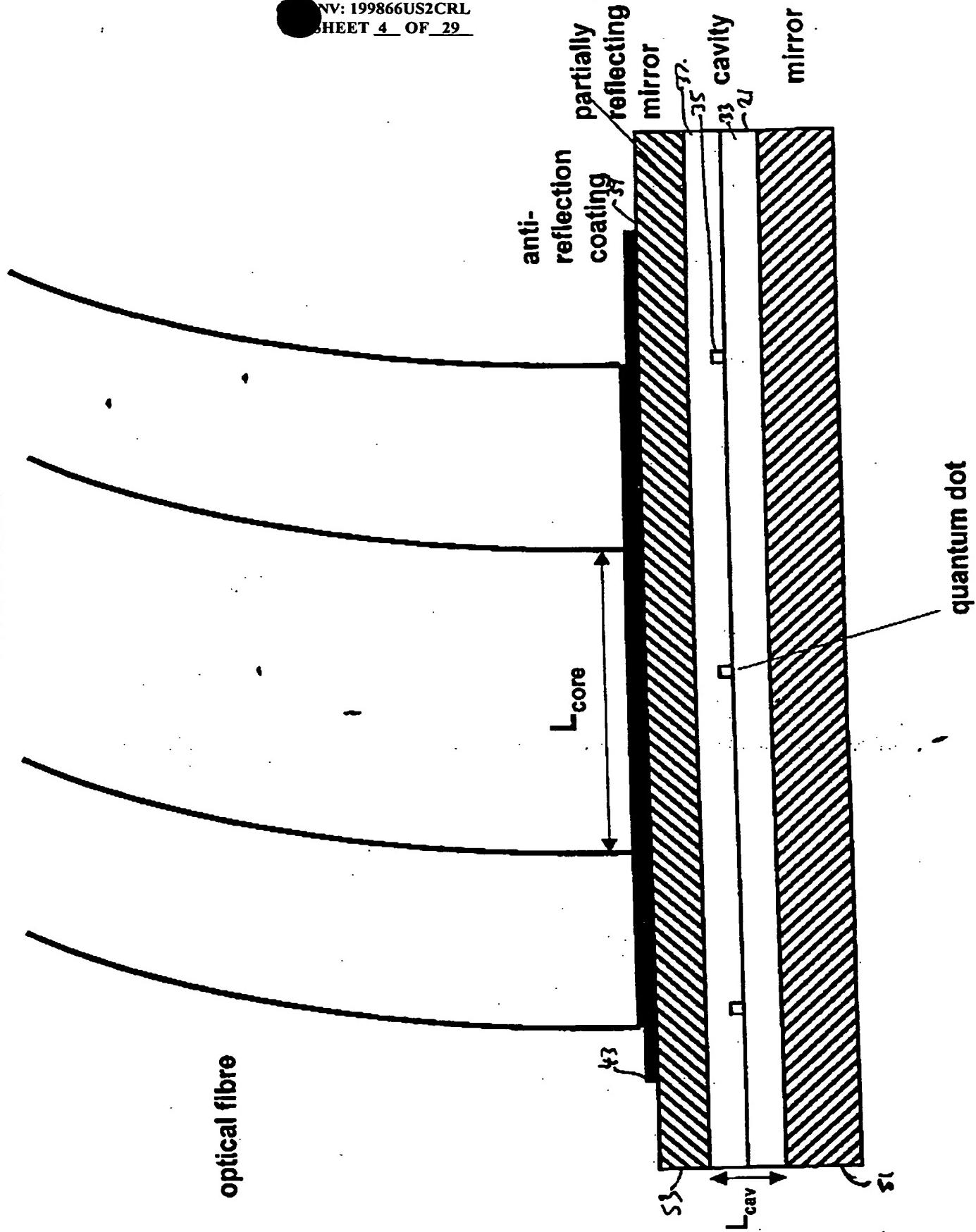
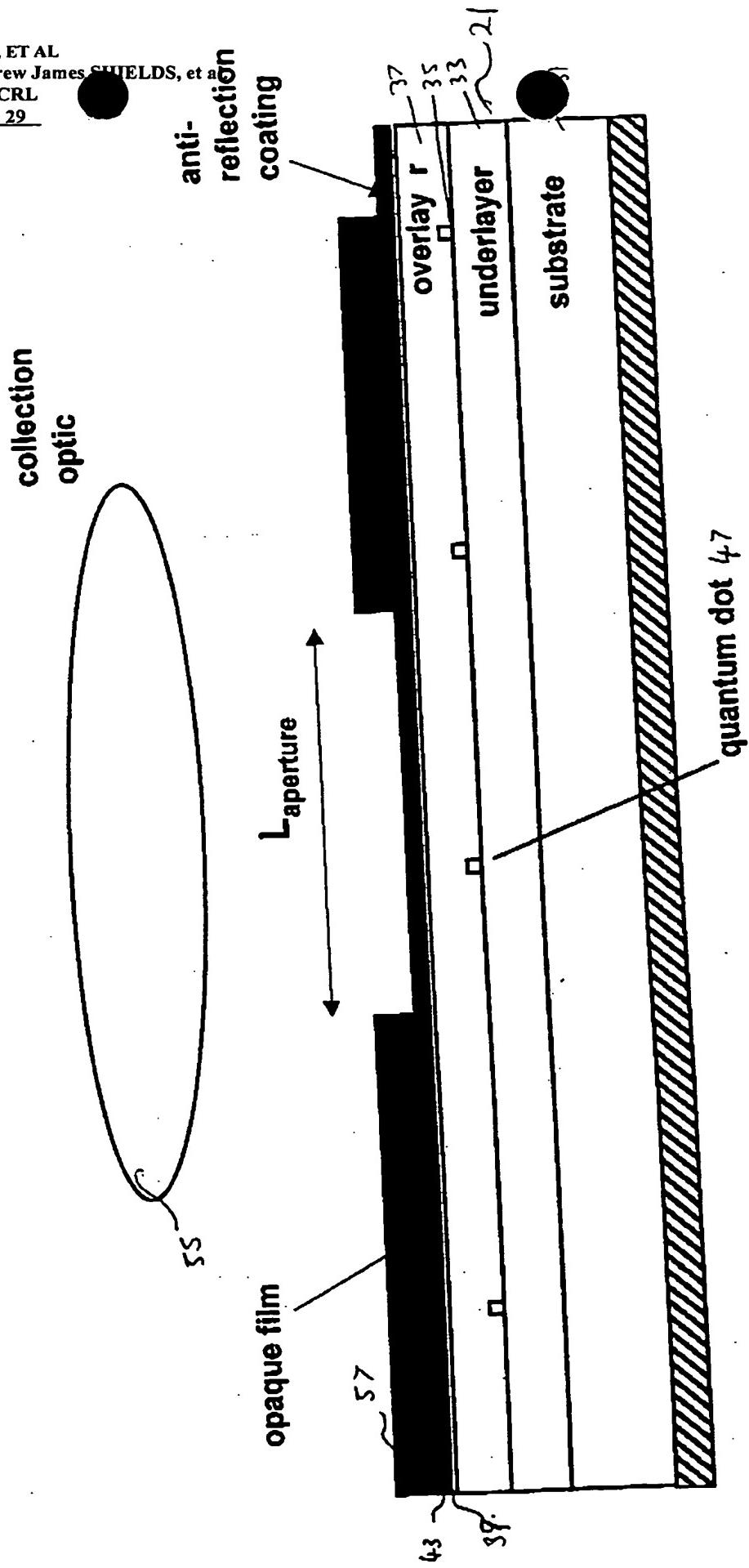
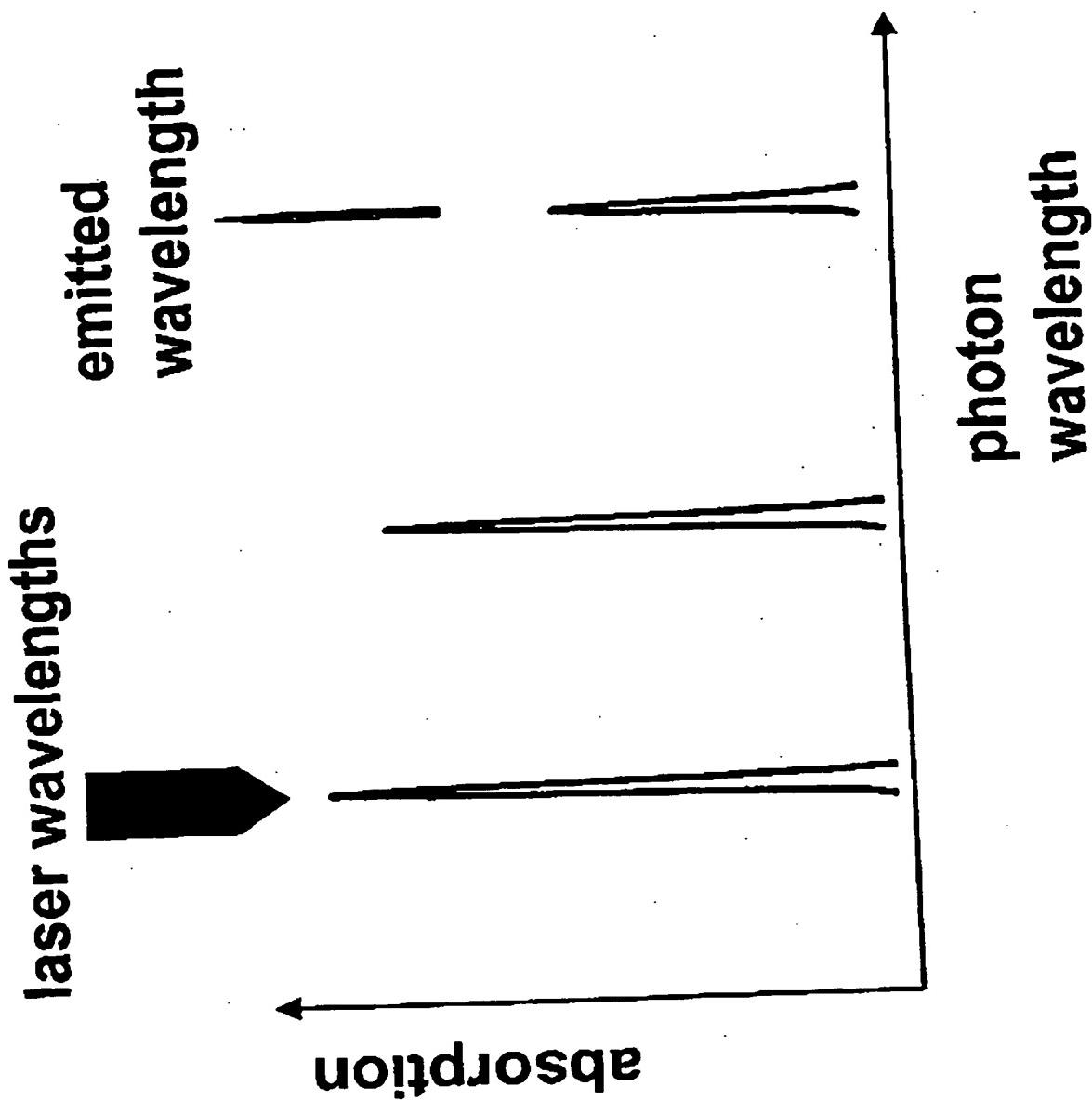


Fig 4

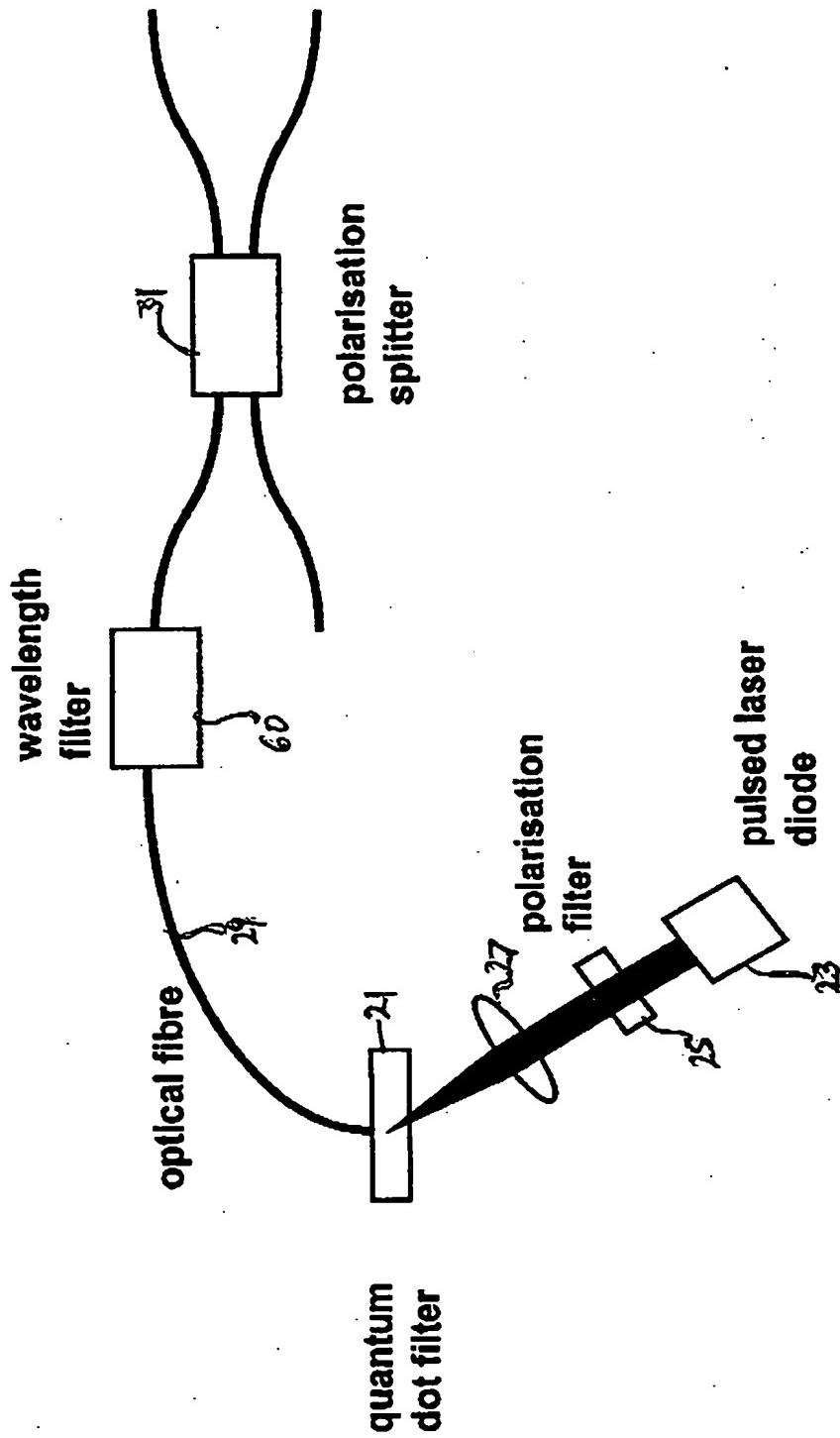
Fig.5

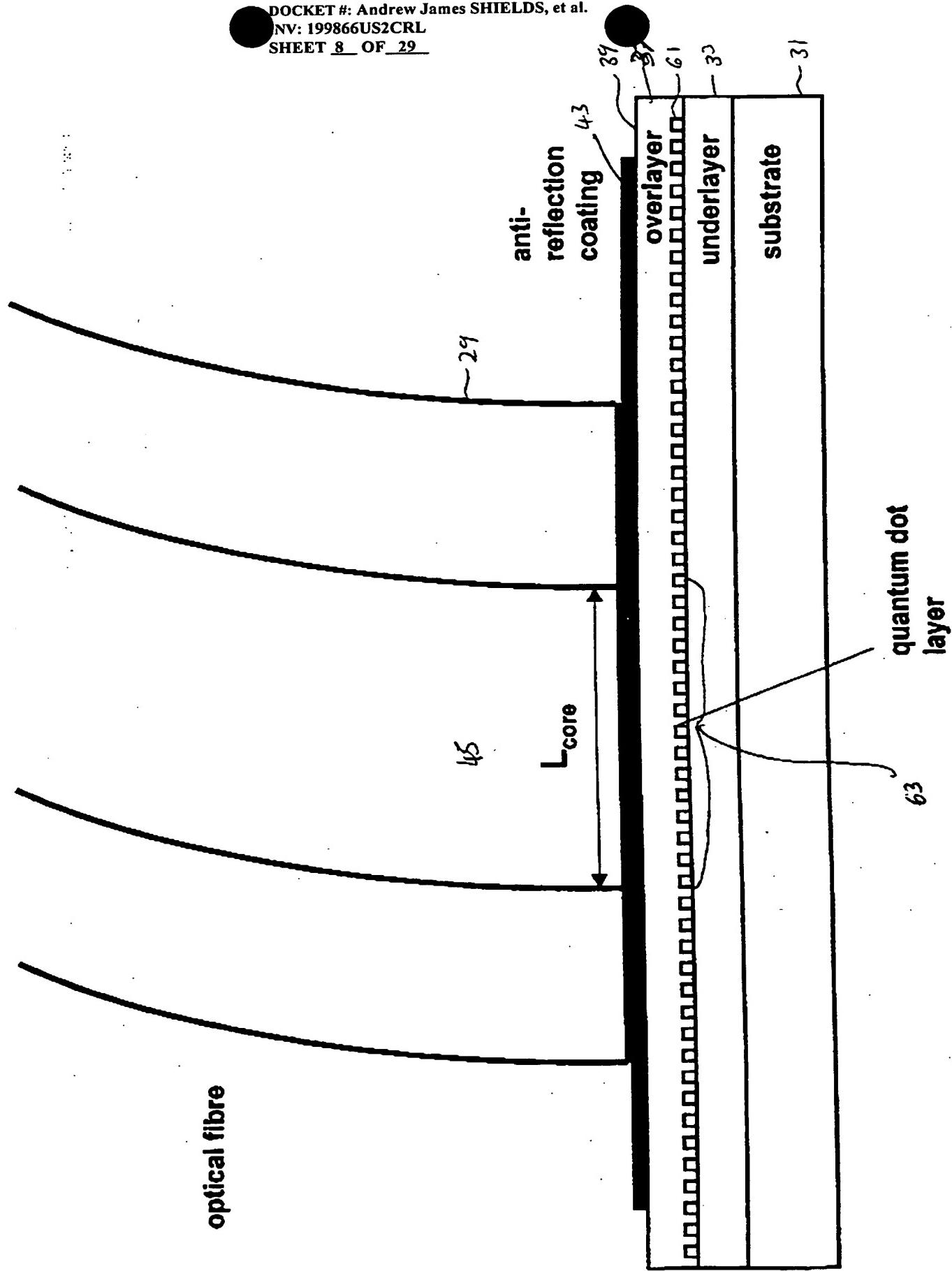
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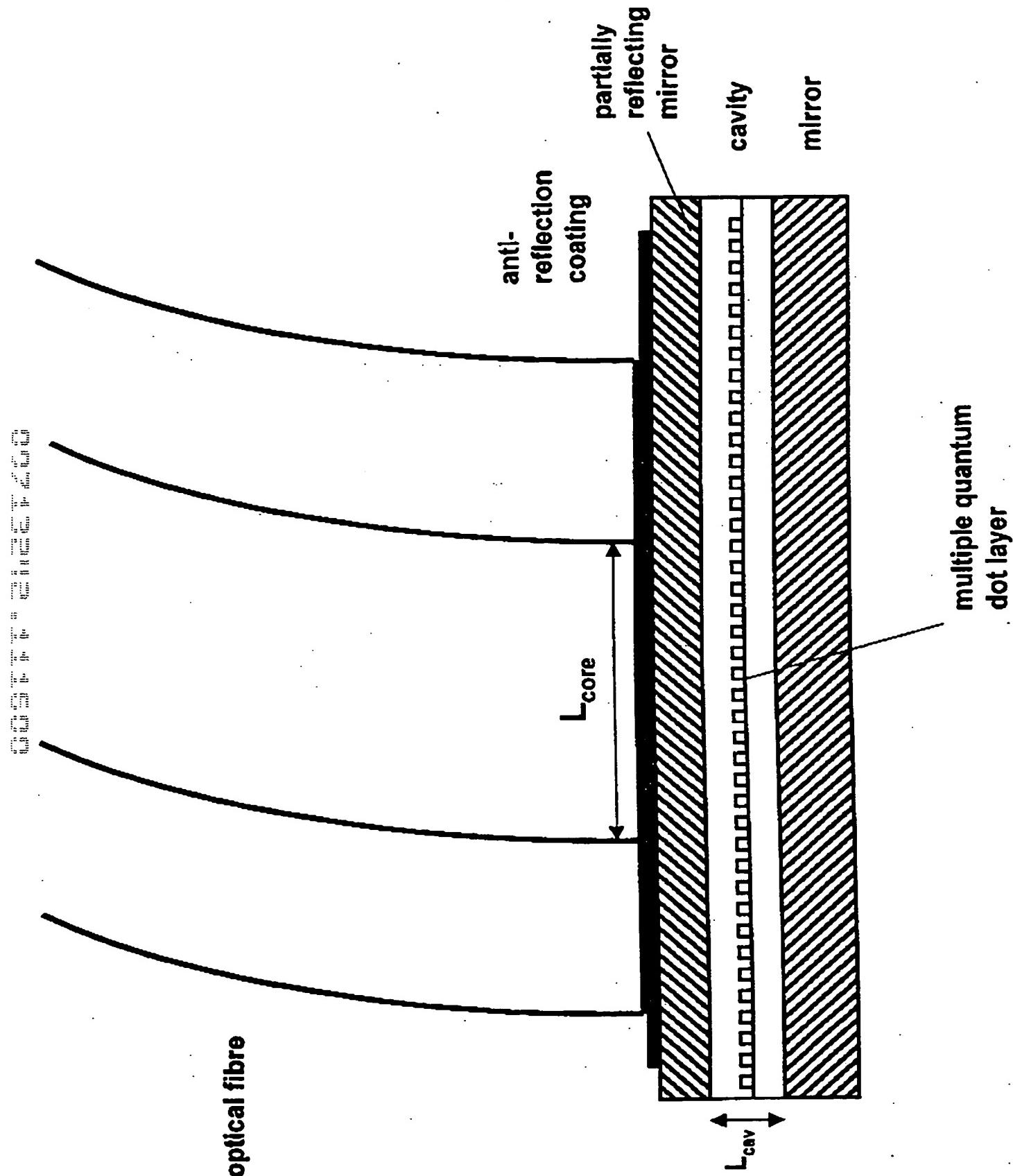




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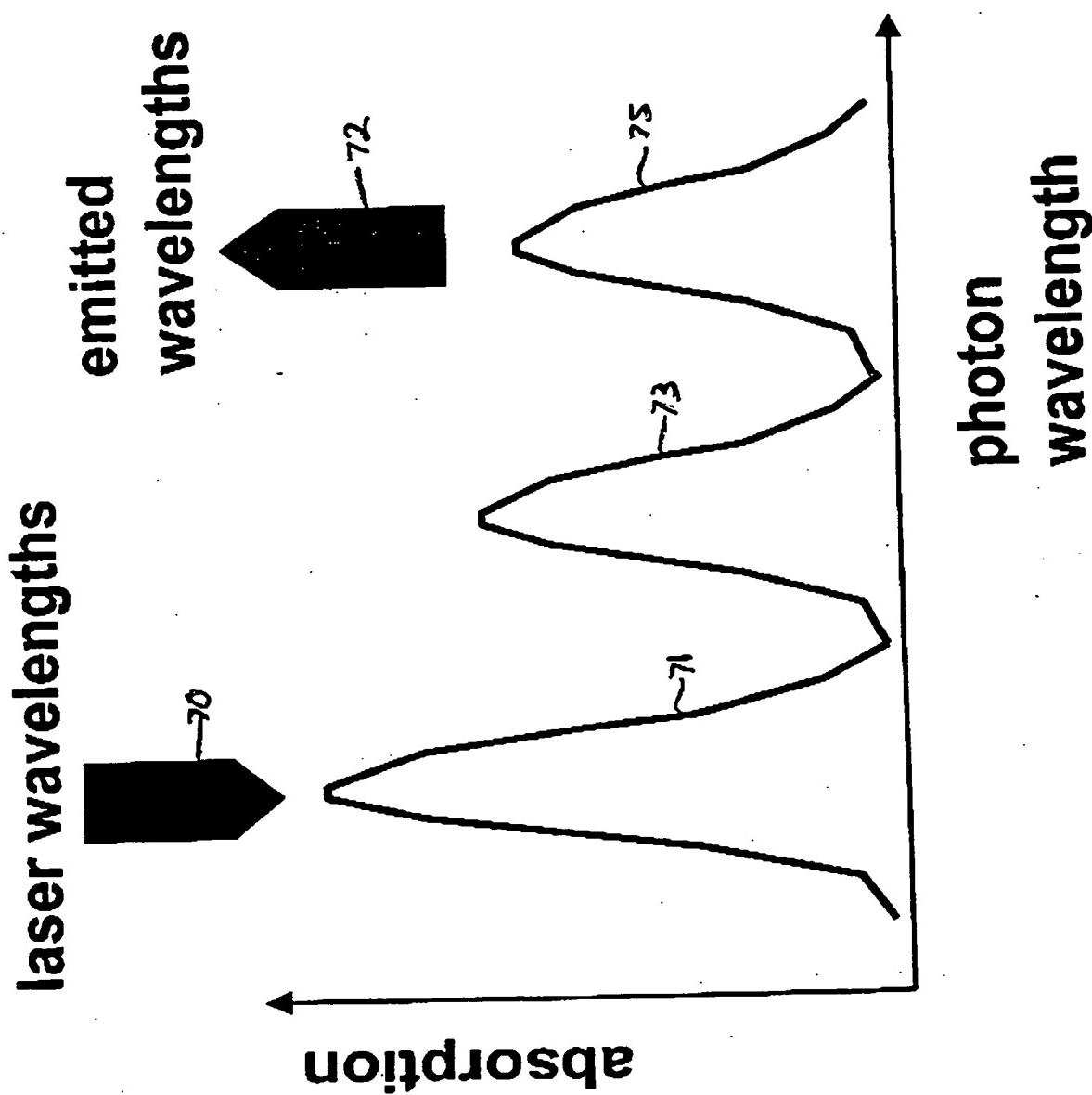
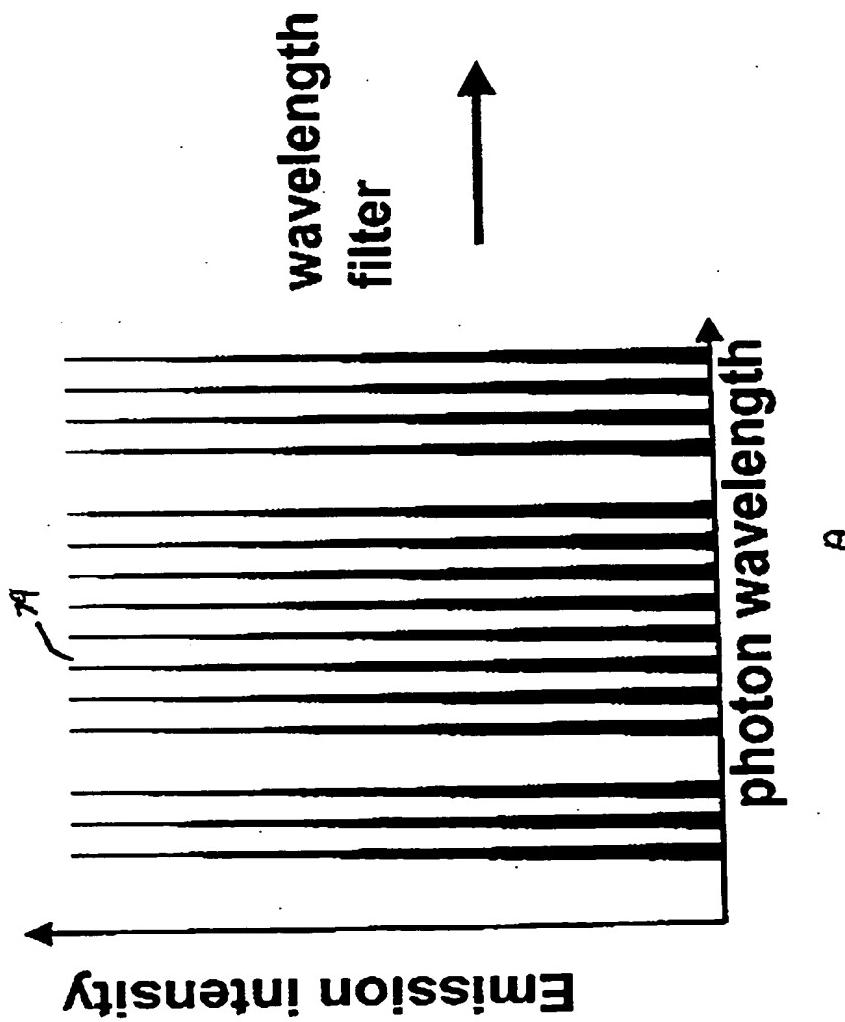
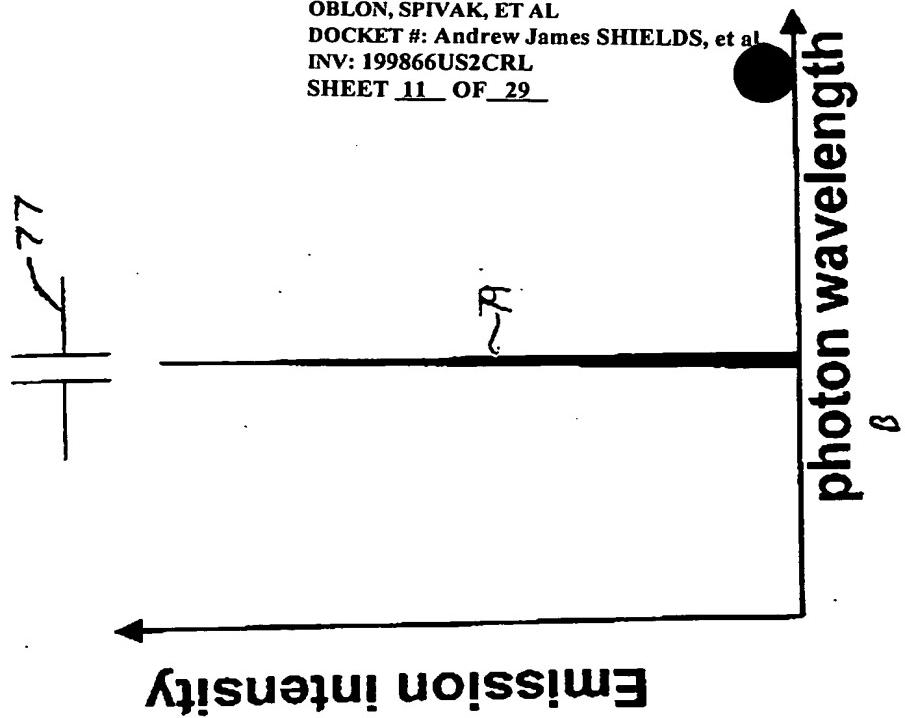


Fig. 11



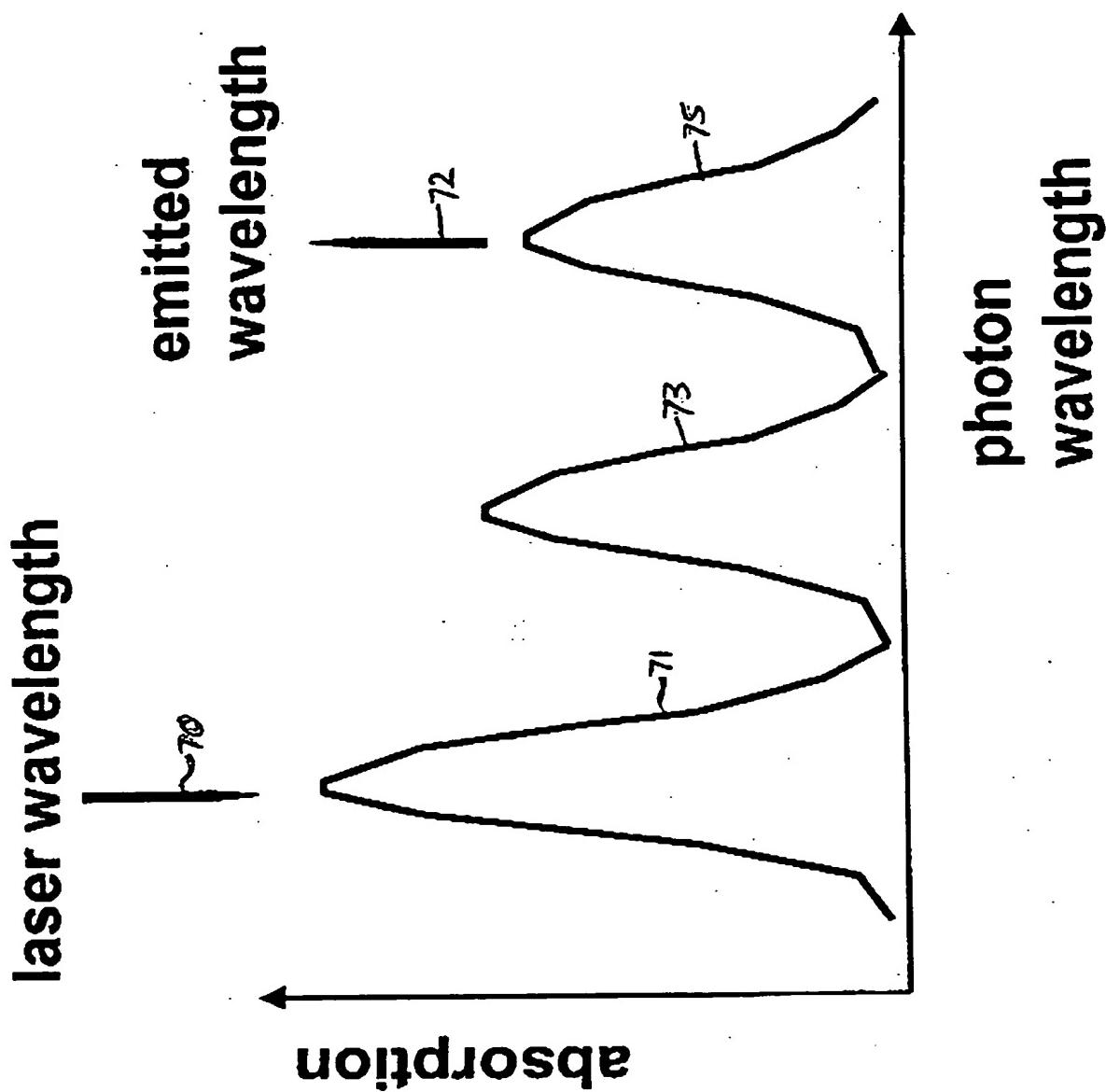


Fig 12

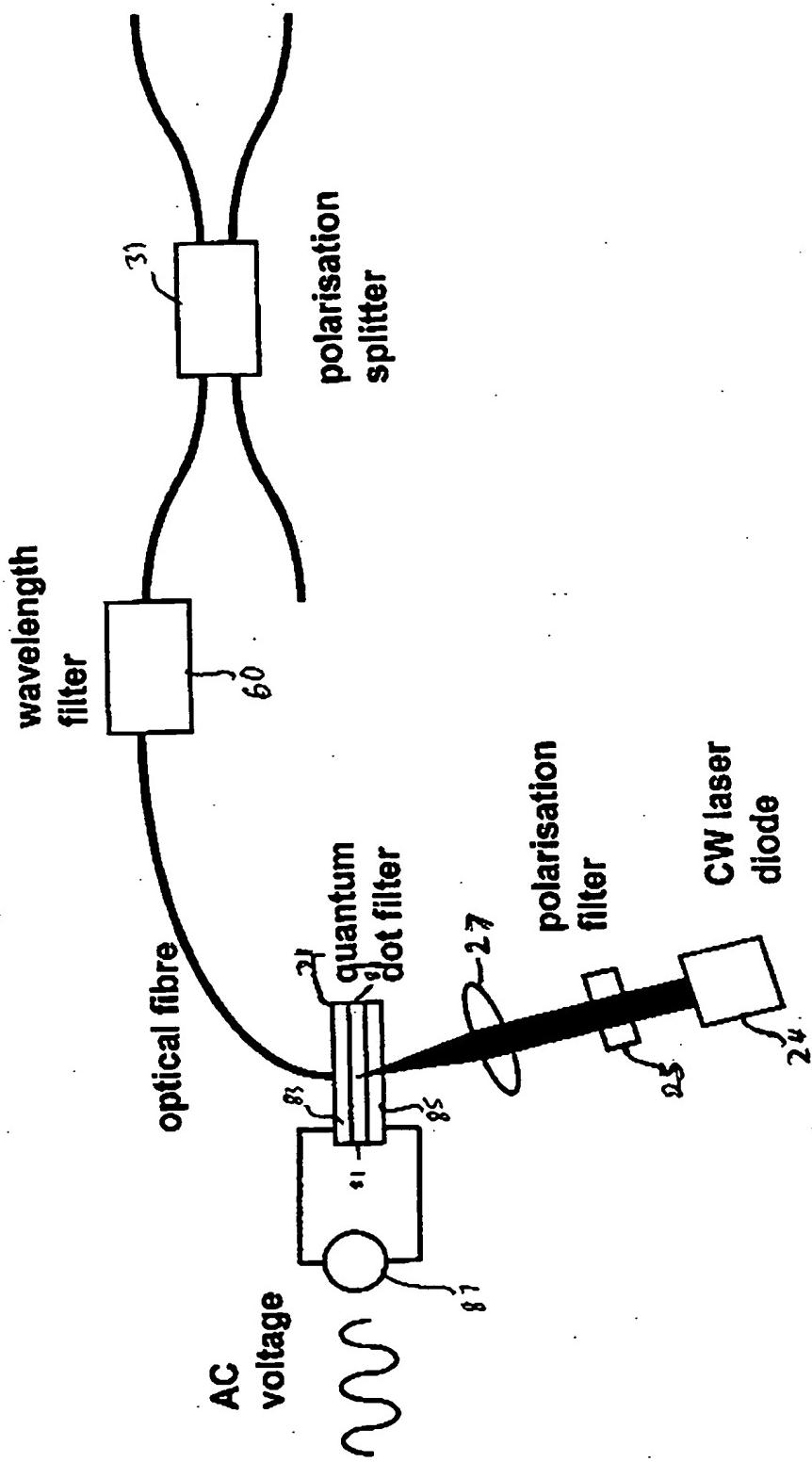


Fig. 13

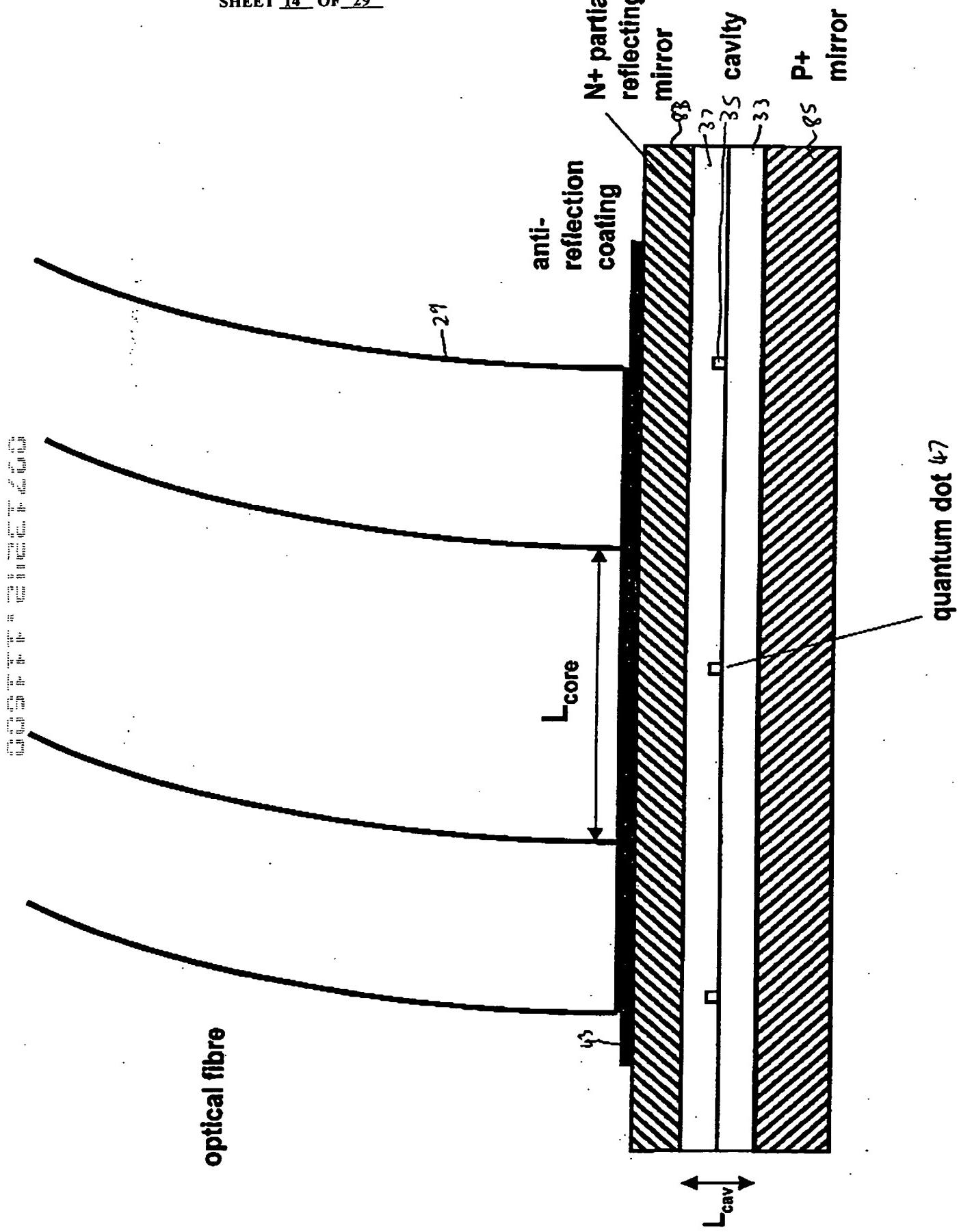


Fig 14

Fig. 15

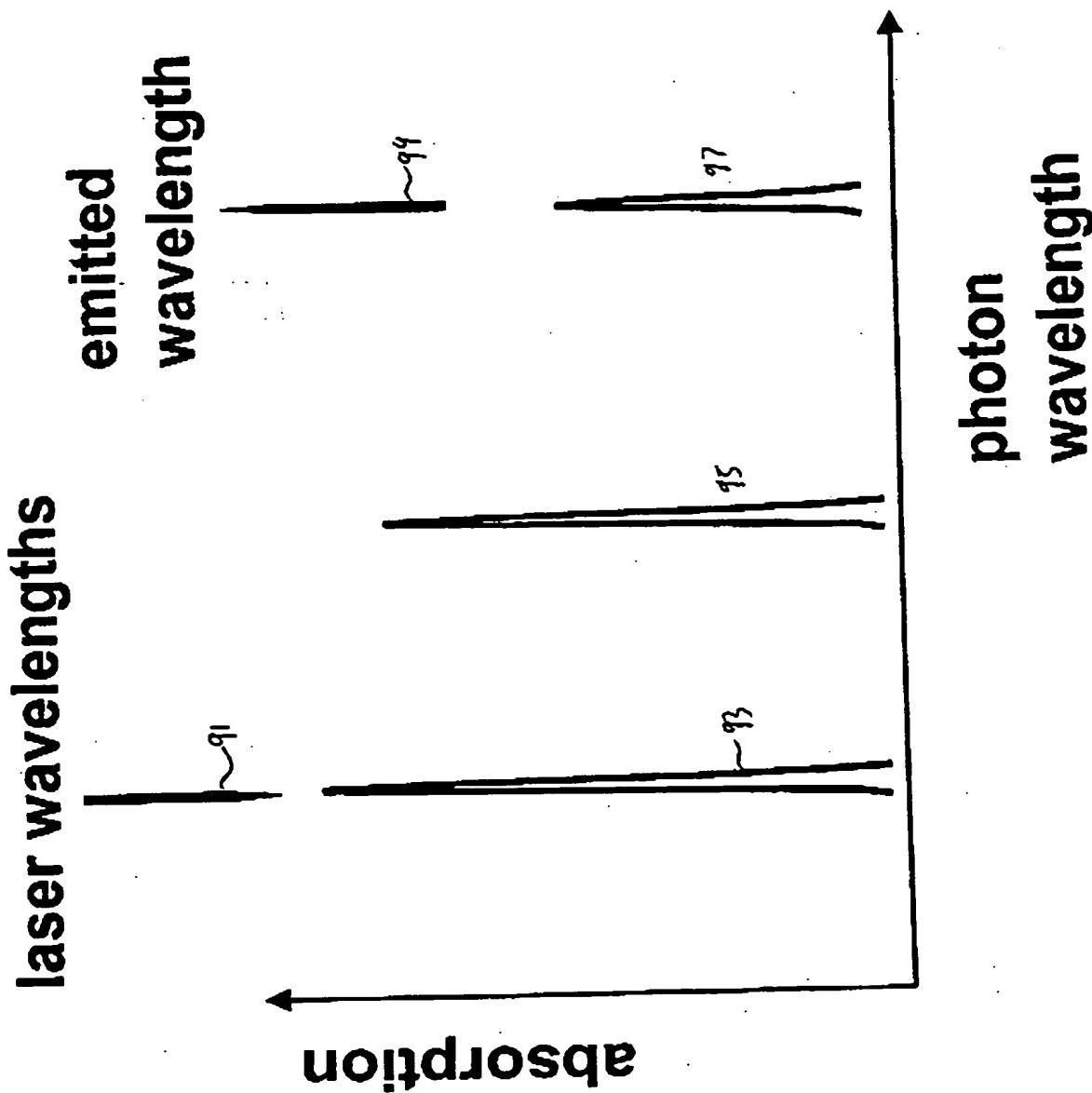
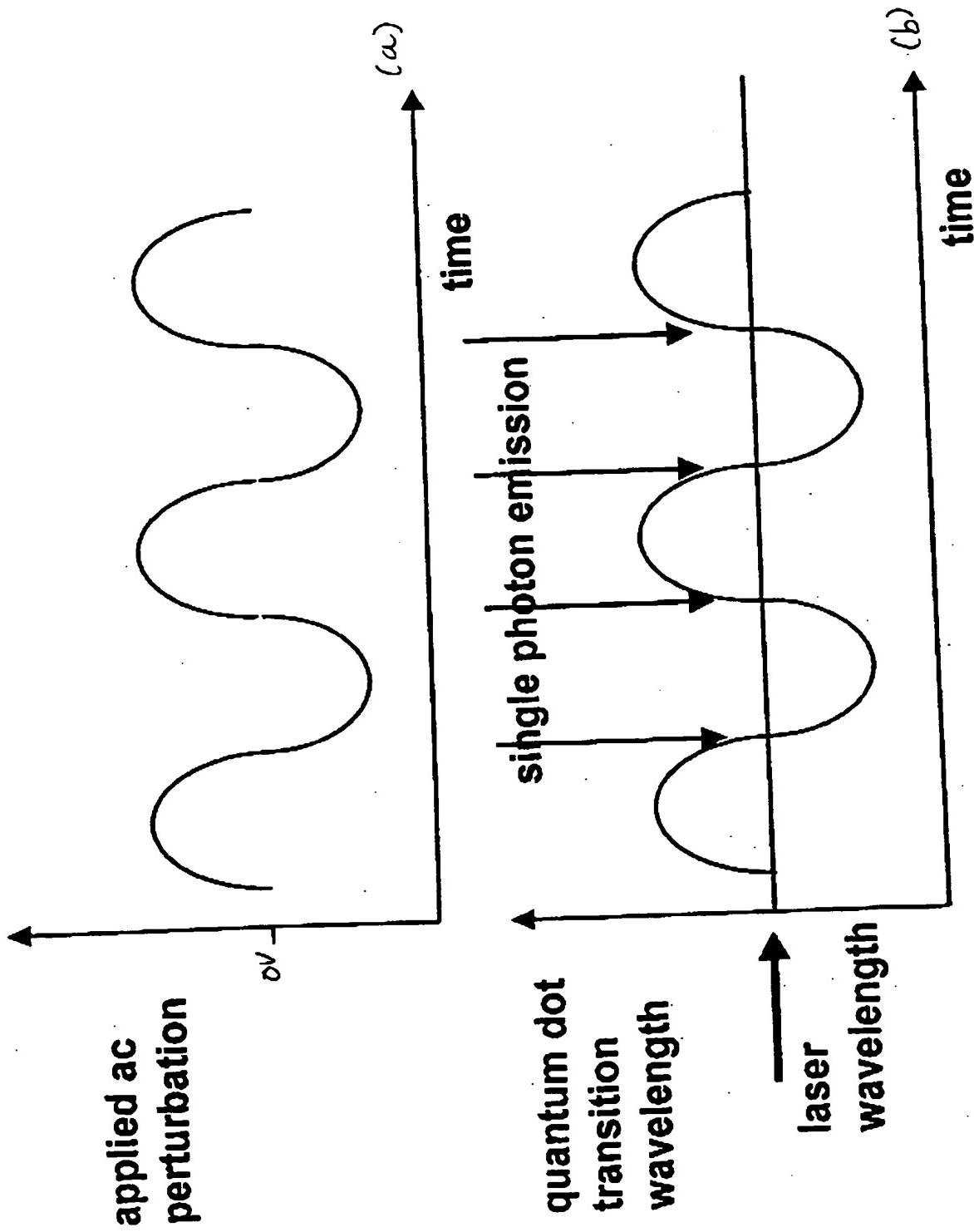


Fig. 16

16129

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# Electrically Injected QD Single Photon Emitter

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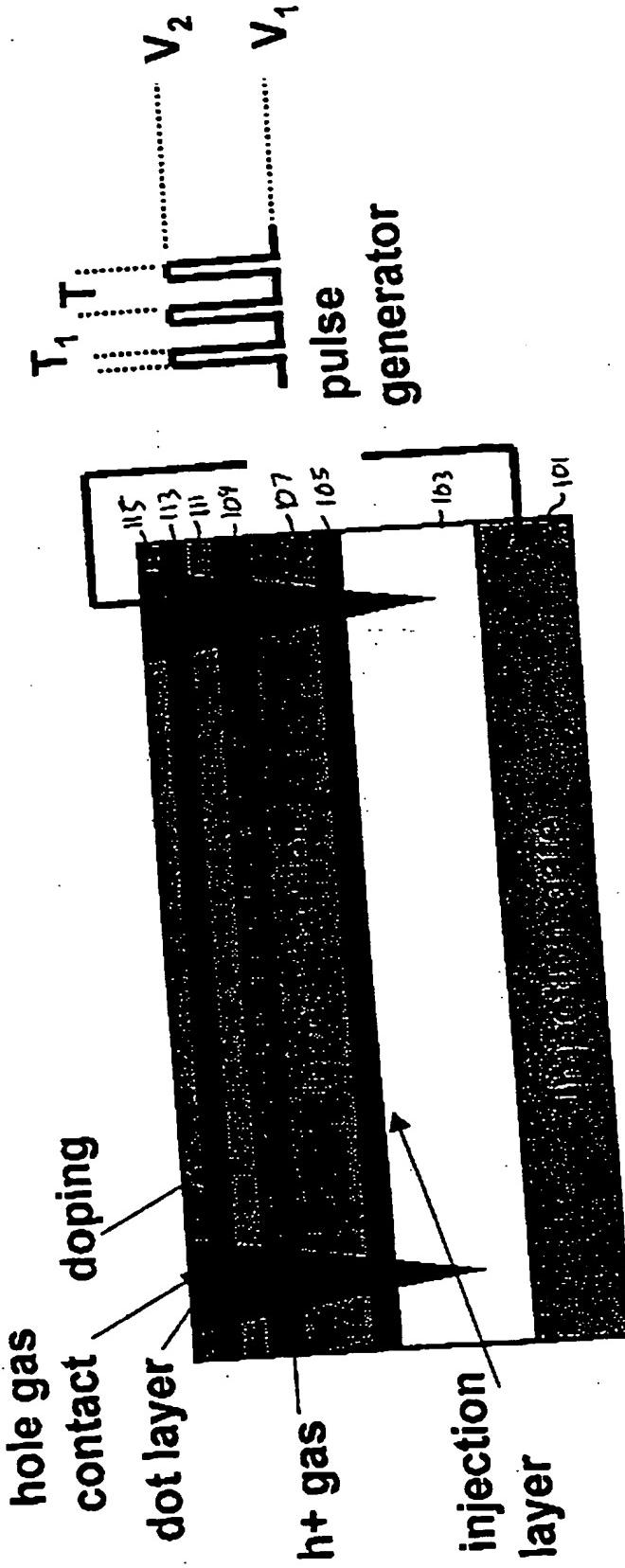


Fig.17

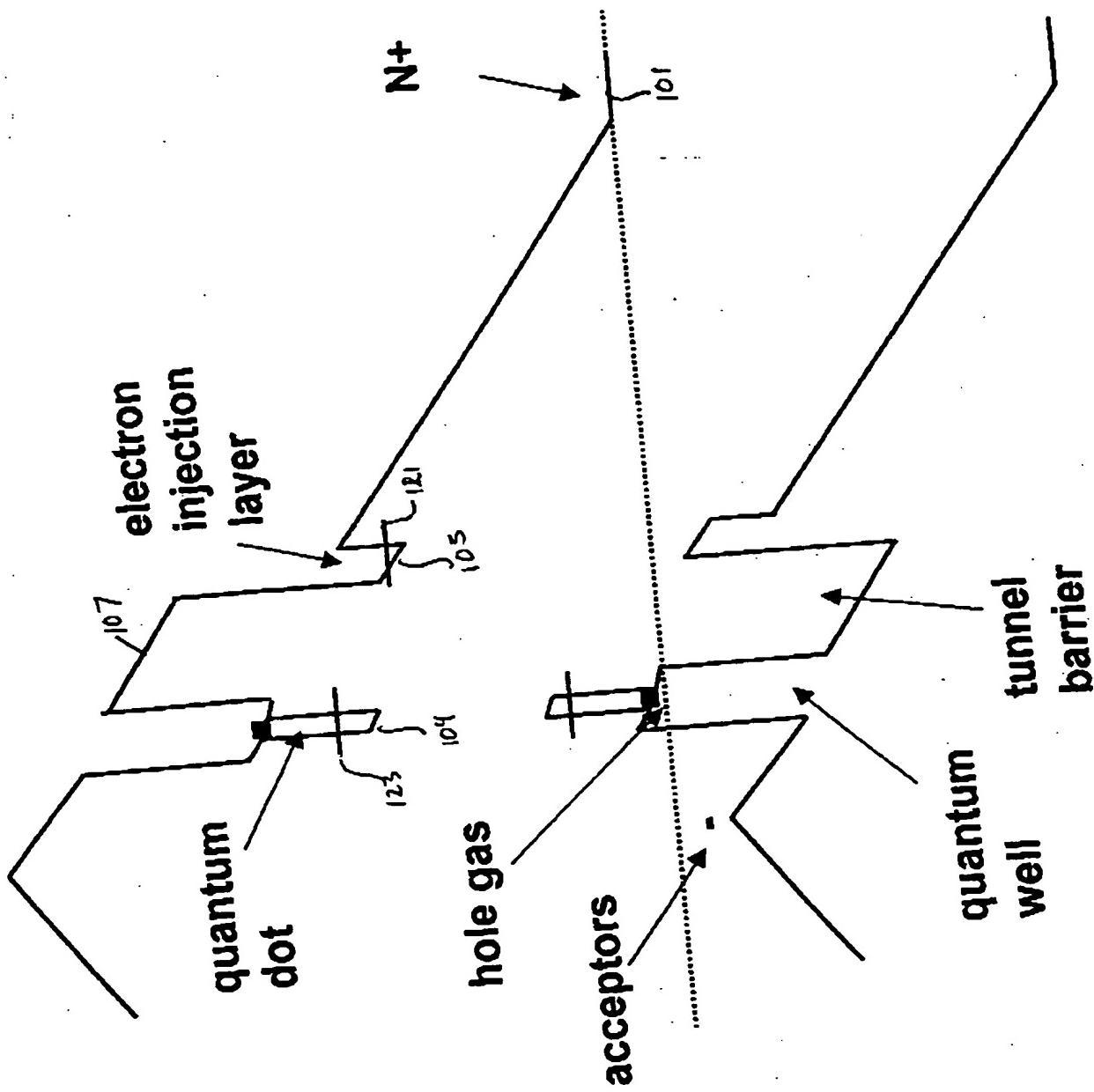
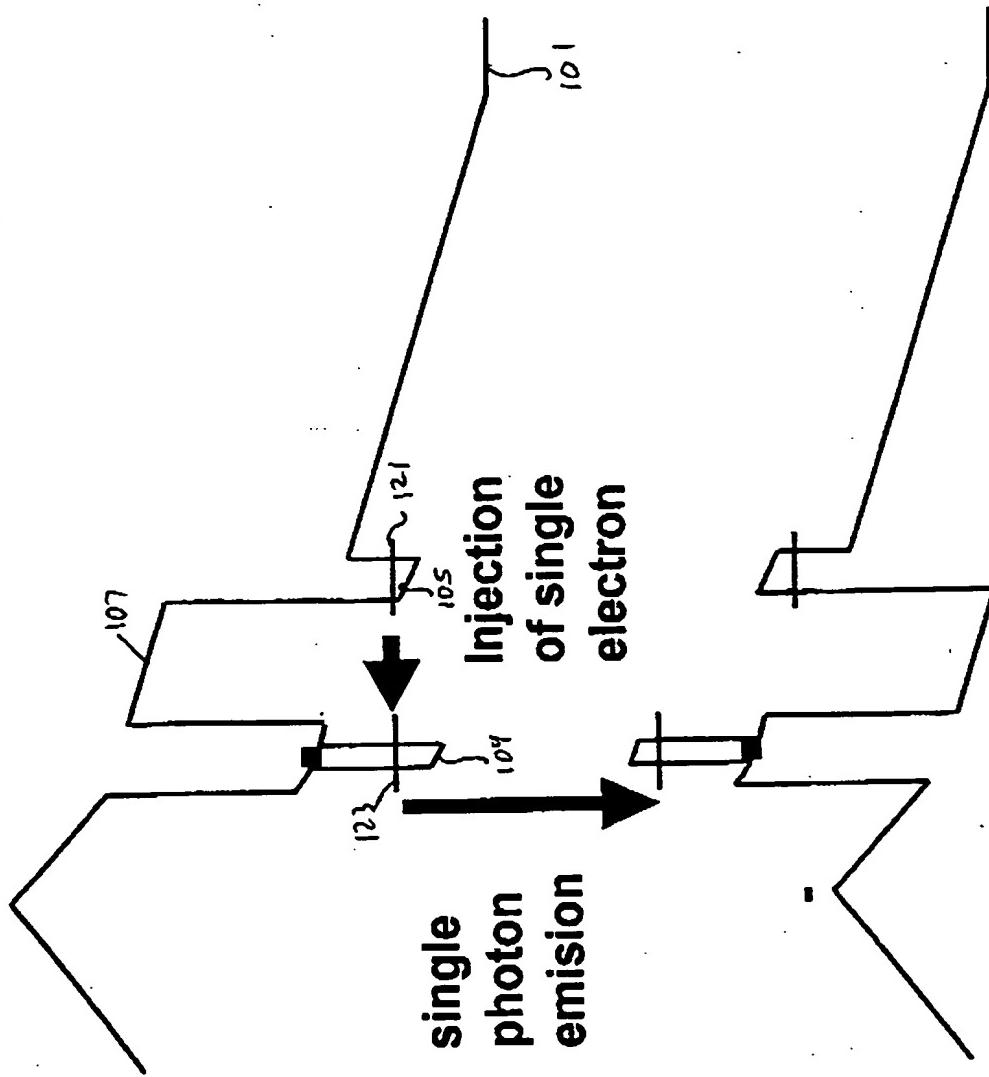


Fig. 18



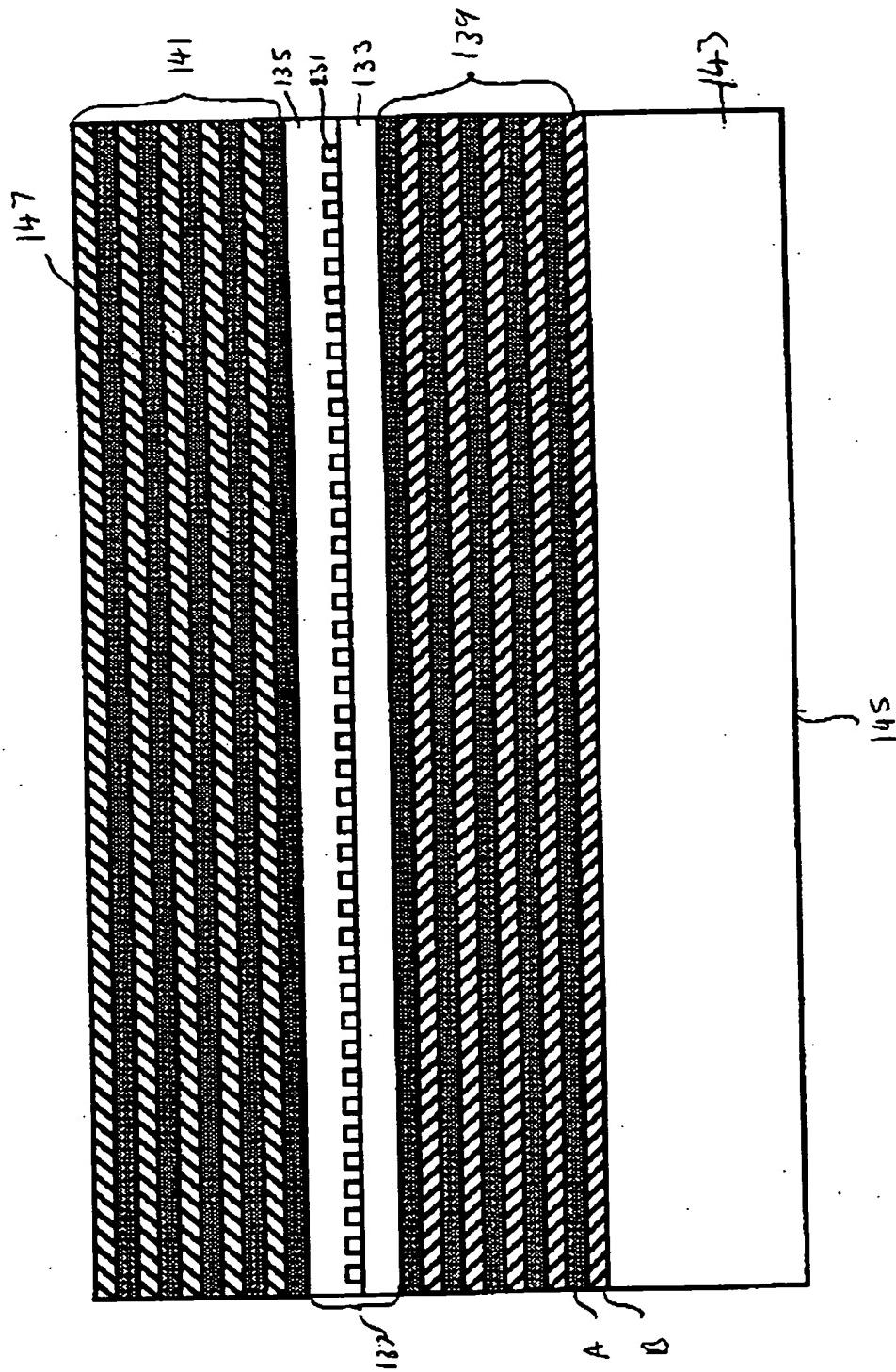
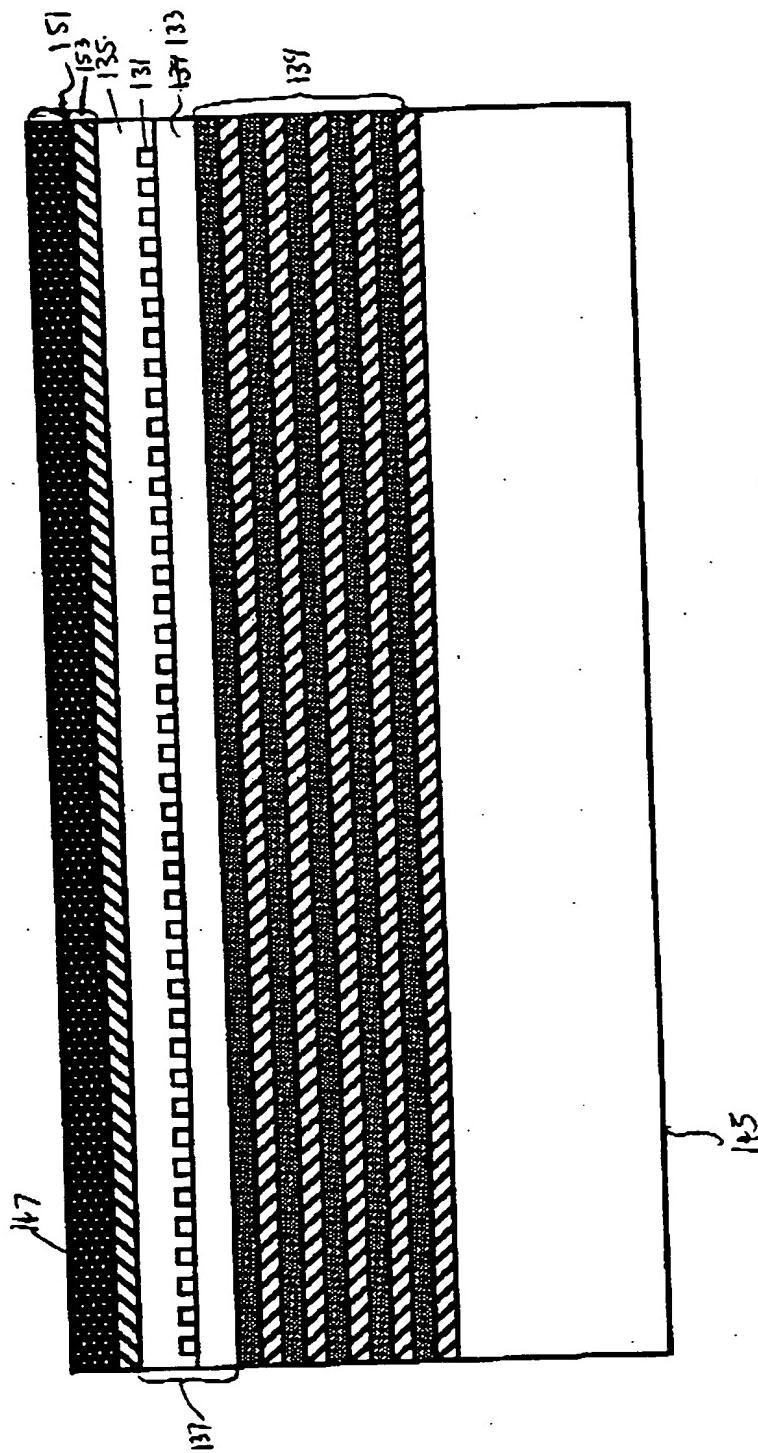


Figure 20

Figure 21



Active QW - remotely doped QW containing  
tunable excess electron density

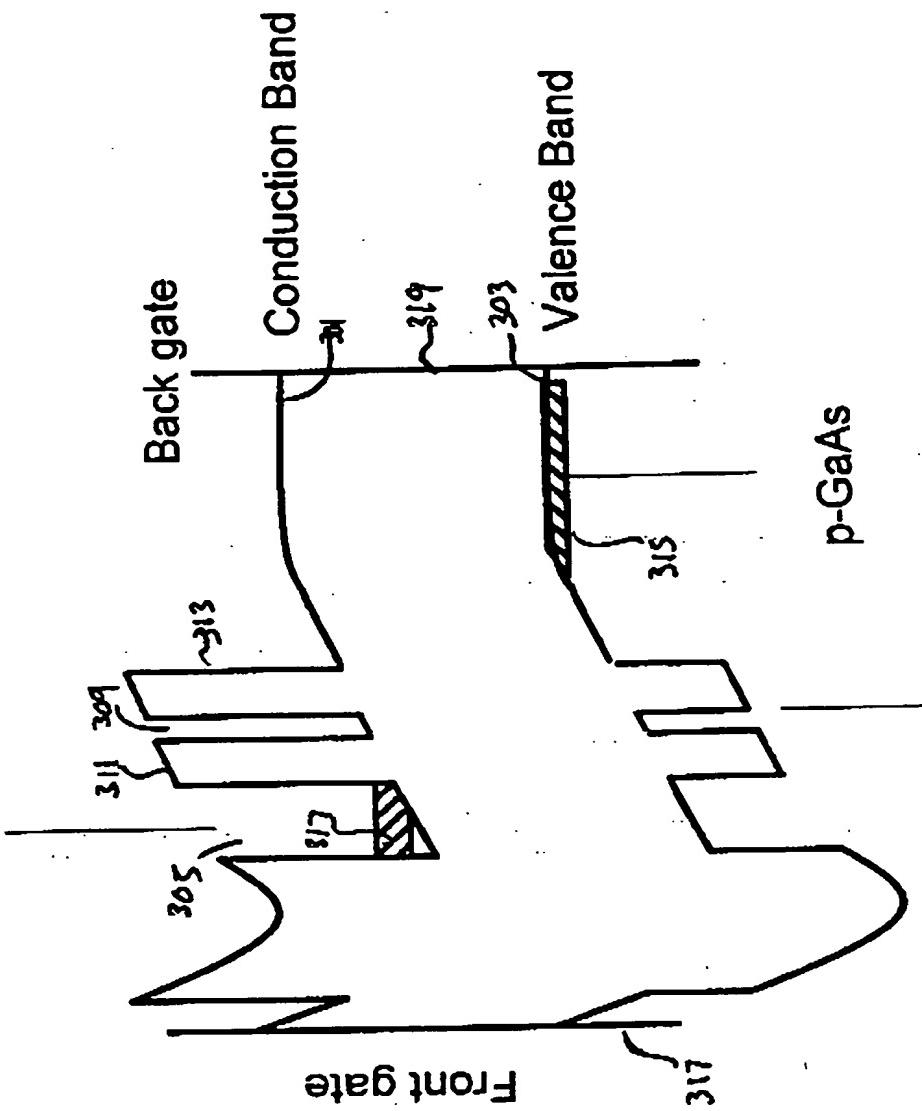


Figure 22  
Tunnelling QW - controls injection  
of holes into active region

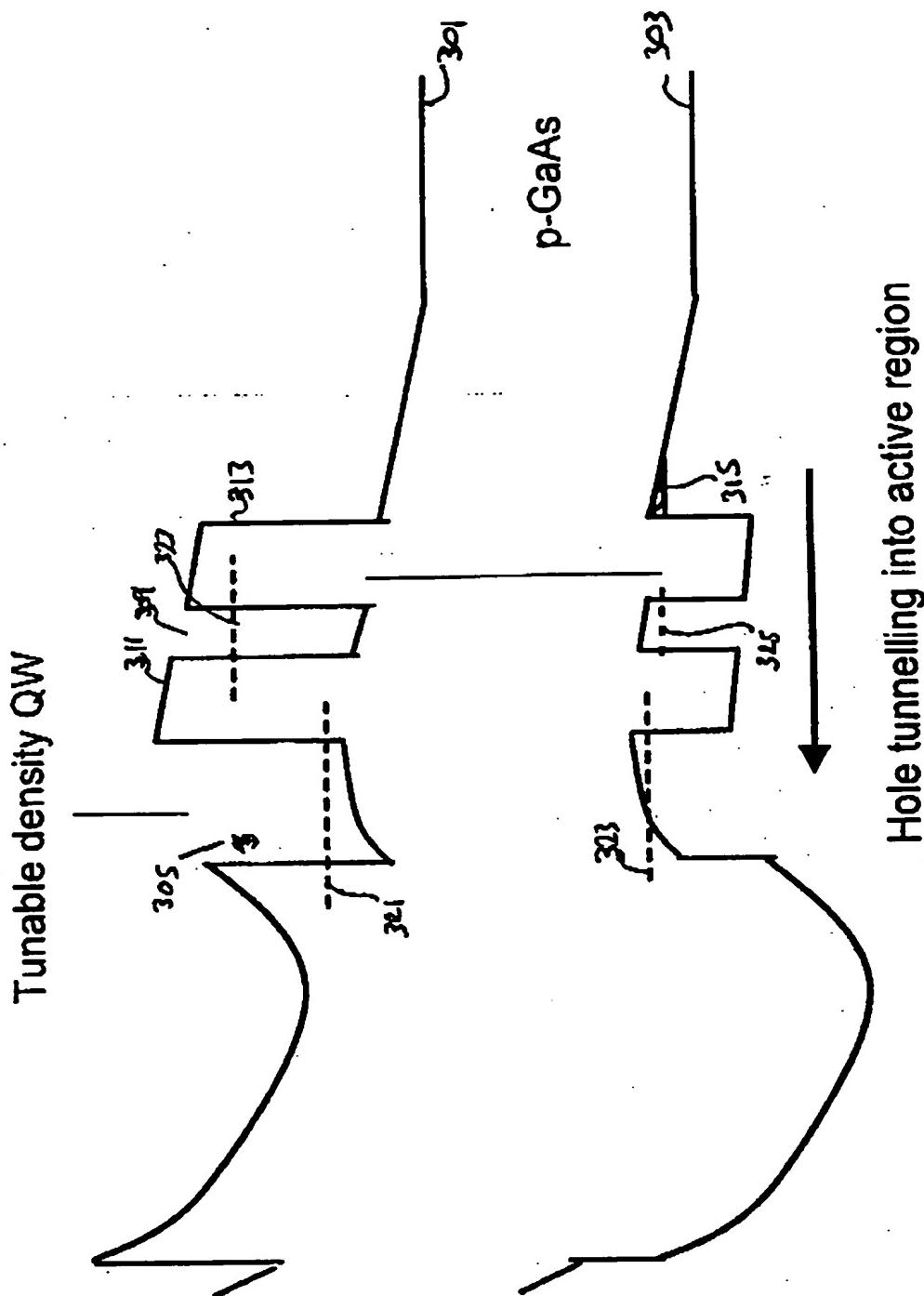


Figure 23

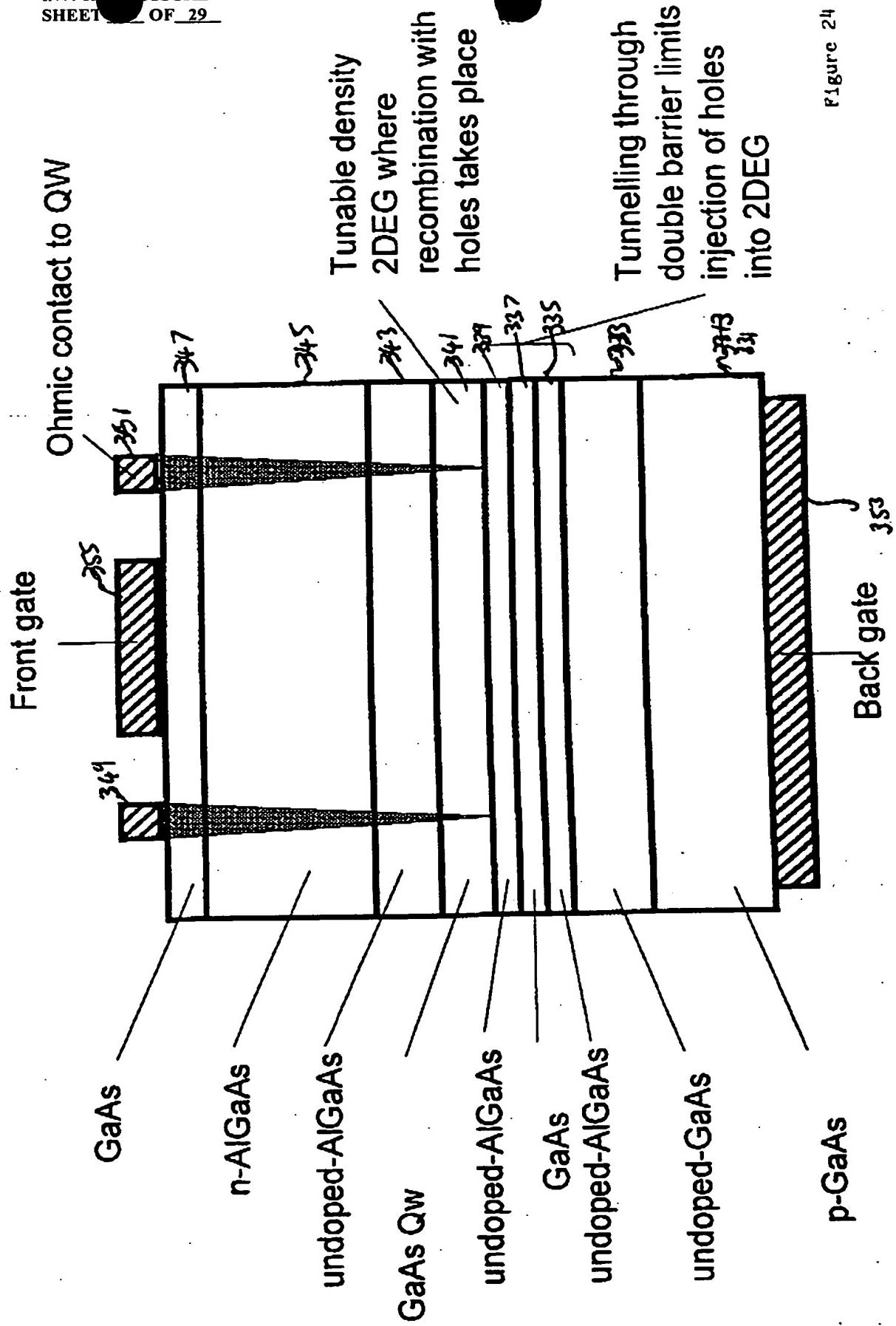
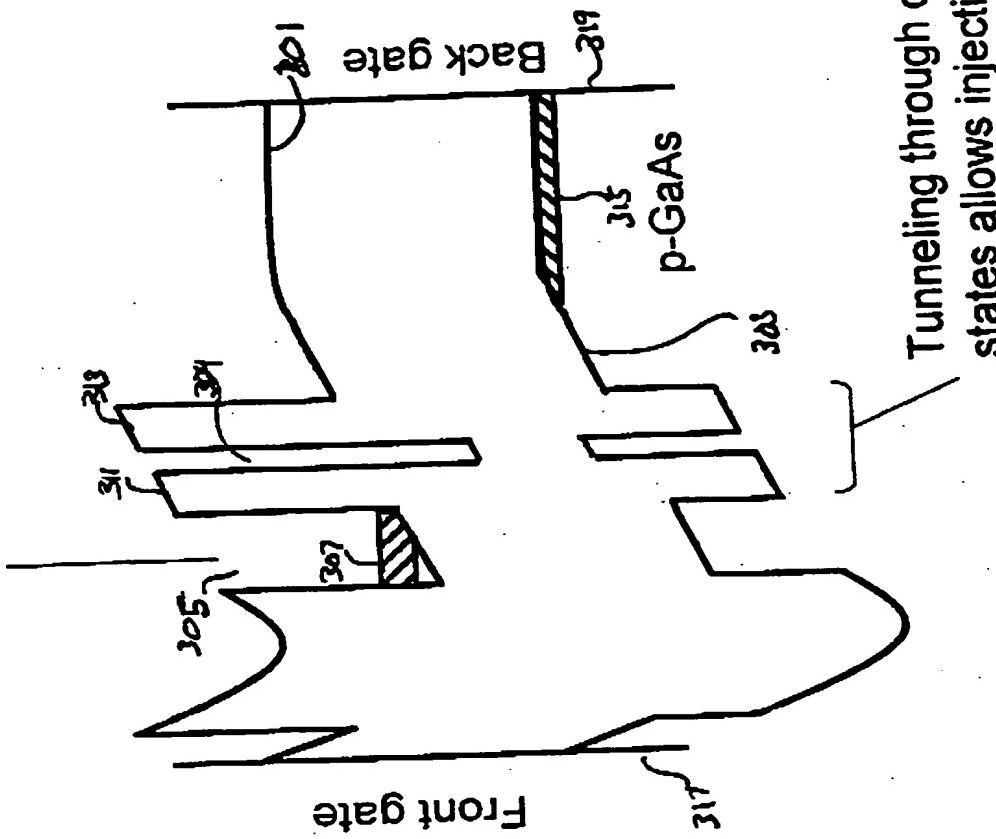
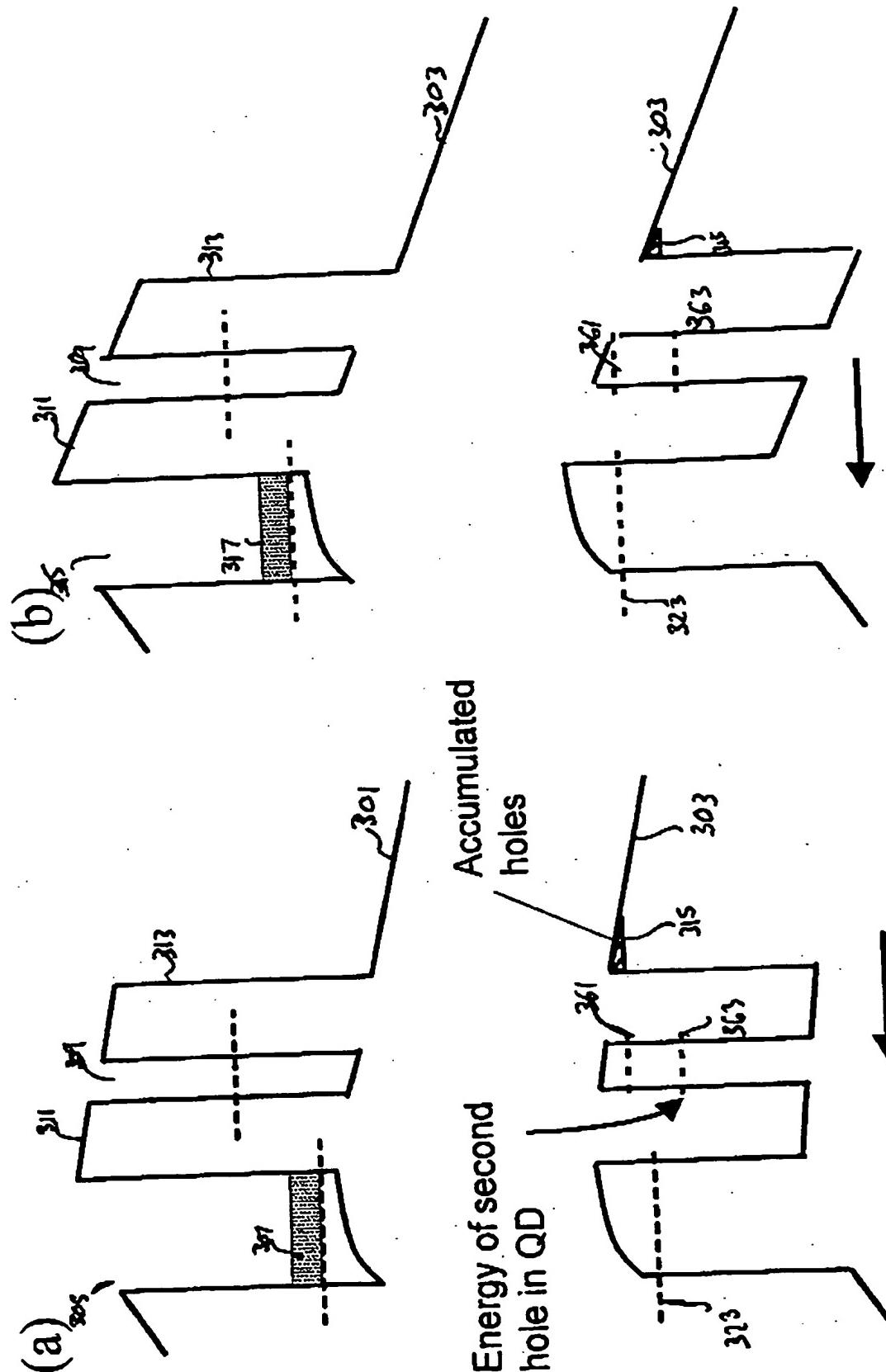


Figure 24

Active region - remotely doped QW containing  
tunable excess electron density



Tunneling through quantum dots  
states allows injection of holes  
one-by-one into active region



The Hole tunnels from the QD to the active region

1 Hole tunnels into a QD

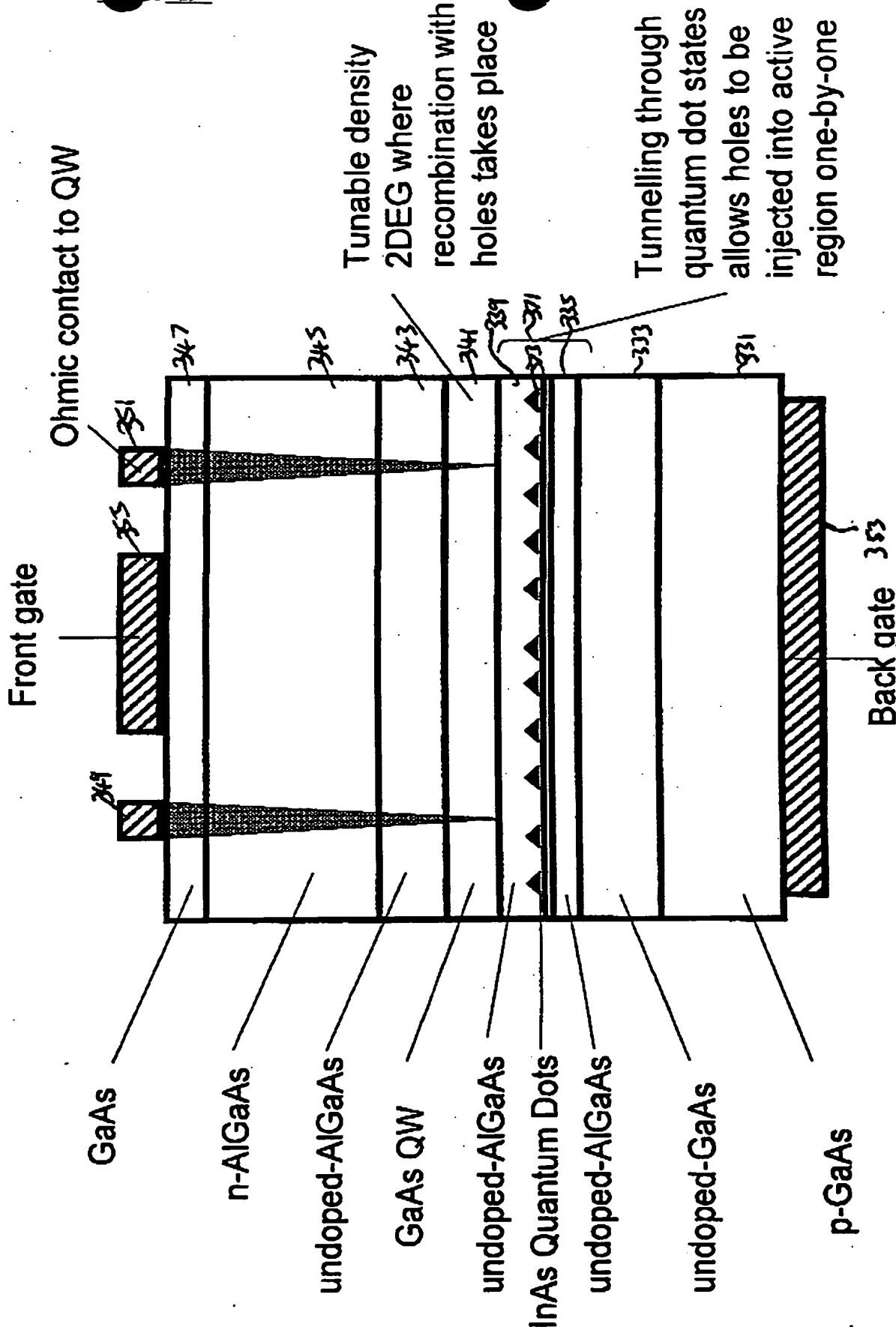
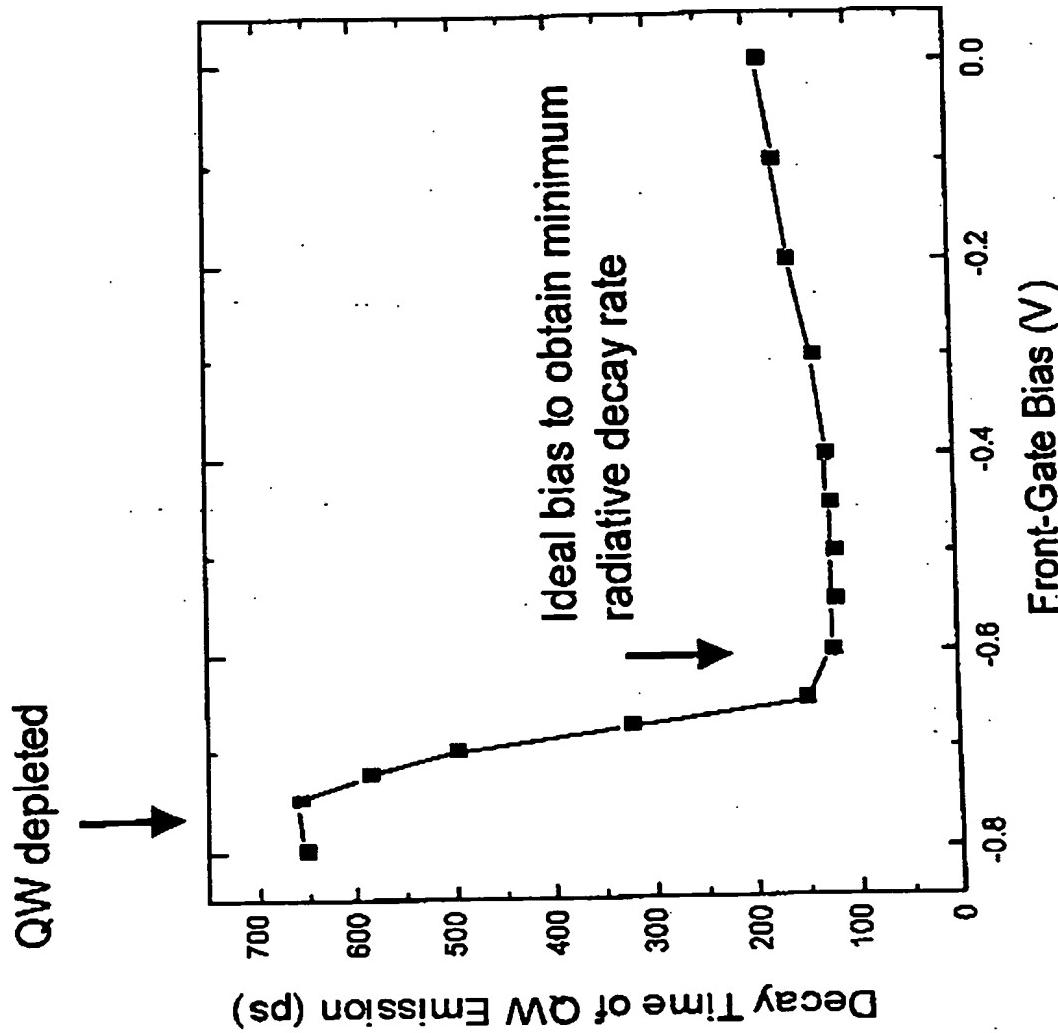


Figure 27.



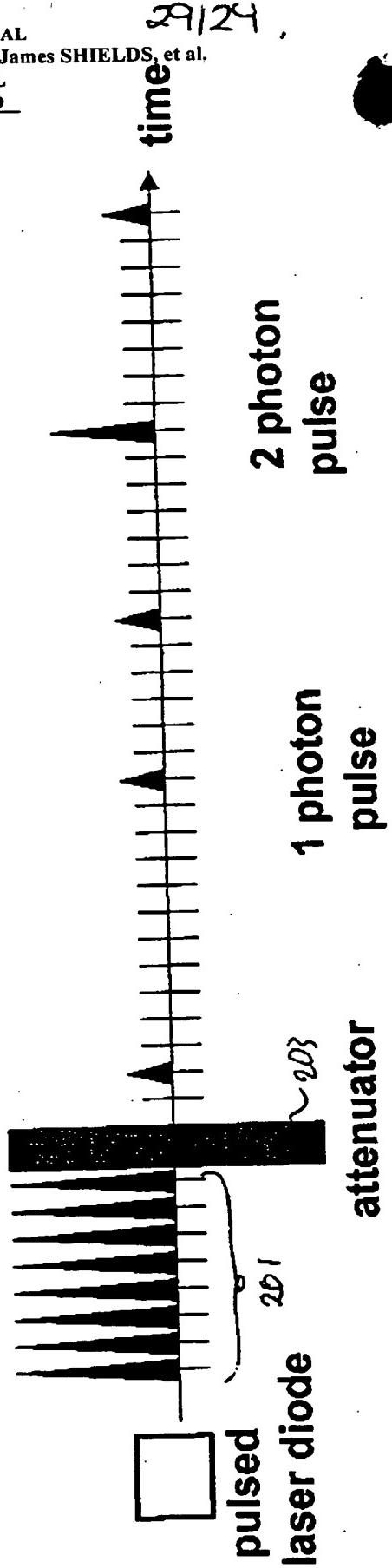
Increasing excess electron density

Figure 28

Prior Art

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TOTAL P.90

Figure 29